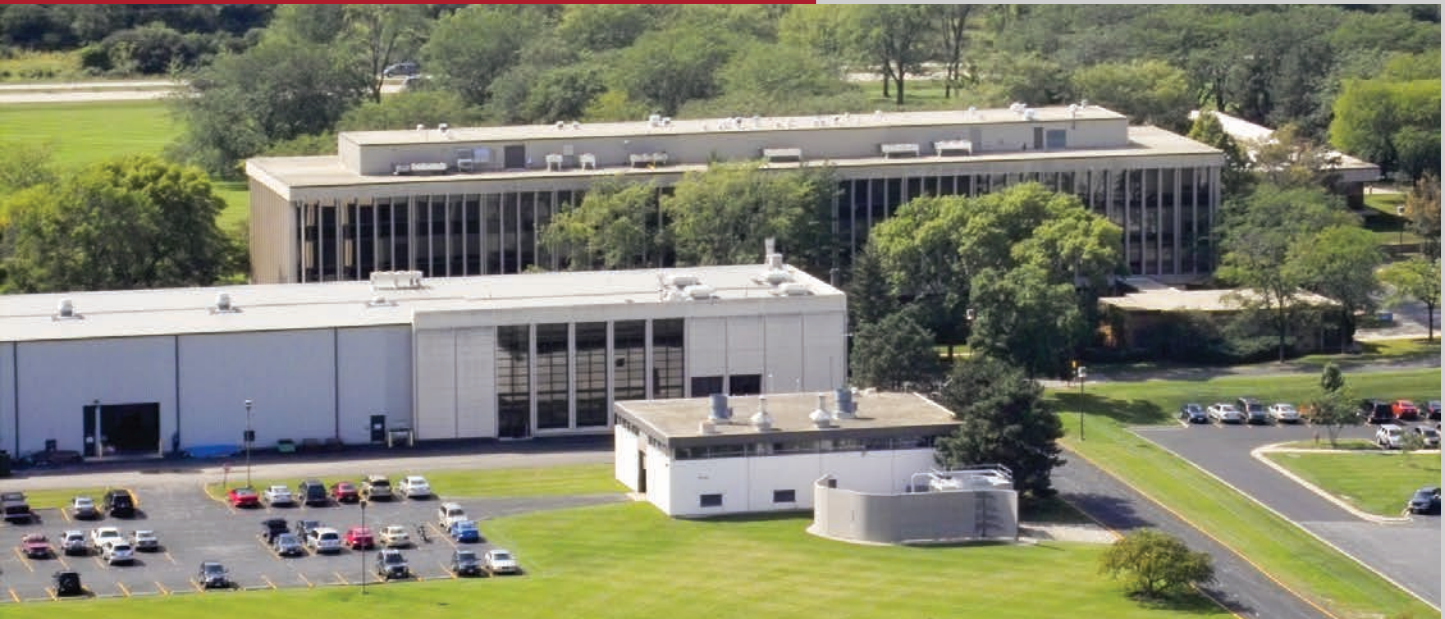




USG TESTING SERVICES

FIRE | STRUCTURAL
ACOUSTICAL | ANALYTICAL



usg.com/cictesting

INNOVATION

For more than a century, USG has been bringing innovation to the forefront of the building industry. During this time, USG's Corporate Innovation Center (CIC) has developed significant capabilities and expertise in conducting a wide range of fire, structural, acoustical and analytical evaluations. These evaluations are done to support new products or systems development, address unique construction project challenges, comply with independent certification requirements, and to gain a more in-depth understanding of a desired subject area.

**NOW,
WE ARE PROUD
TO OFFER THE USG
TESTING SERVICES TO
OTHER COMPANIES.**

PEOPLE

The laboratory staff has backgrounds in Mechanical, Structural, Chemical and Civil Engineering along with Chemistry, Acoustics, Physics and Architecture. More than 50% of the group members have advanced technical degrees and many maintain leadership roles in various organizations to drive industry standards. Memberships include the following:

- National Fire Protection Association (NFPA)
- ASTM International
- American Concrete Institute (ACI)
- Tile Council of America (TCNA)
- American Society of Heating, Refrigerating, and Air-Conditioning (ASHRAE)

THIRD-PARTY CLASSIFICATIONS

The laboratory has much to offer in the realm of third-party classification. USG has been working with certification bodies for decades, including:

- Canadian Construction Materials Centre (CCMC)
- City of Los Angeles
- Intertek
- Factory Mutual
- International Maritime Organization (IMO)
- Miami-Dade County Approvals
- Progressive Engineering Inc.
- Southwest Research Institute
- State of California-OSHPD
- State of Florida
- U. S. Coast Guard

In addition to certification testing, the laboratory supports third-party classification of products for fire and acoustical performance by Underwriters Laboratories (UL LLC), Underwriters Laboratories of Canada, and Factory Mutual Research Corporation. USG is currently under UL LLC's Witness Testing Data Acceptance Program, which means certification testing is conducted at USG's own facility and results are submitted to UL LLC for review and product certification.



FIRE TESTING AND EVALUATIONS

USG's portfolio of fire-rated designs classified by Underwriters Laboratories includes more than 100 wall systems and 110 floor-ceiling systems—more than any other building materials manufacturer. In-house test equipment includes a full-scale pressure controlled ASTM E119 furnace for fire-resistance testing of walls and medium- and small-scale furnaces for testing floor-ceiling systems and product development. The wall furnace can accommodate both load-bearing and non load-bearing walls. Capabilities include utilizing a number of small scale furnaces, which also allow for compliance testing to a wide range of domestic and international standards.



THE STANDARDIZED TESTS PERFORMED INCLUDE:

- ASTM E119
- UL 10B/NFPA 252
- ASTM E136
- ASTM C518



STRUCTURAL TESTING AND EVALUATIONS

Structural evaluations include determining wind-load capacities for exterior wall assemblies, shear capacities for walls and ceilings, limiting heights for interior partitions, service ratings for ceramic tile floor systems, abuse resistance performance of partitions and wind uplift capacity for roof assemblies. Full-scale structural tests are performed using a 20' x 32' x 15' universal reaction frame, which provides rigid support points for a variety of axial, trans-verse, shear and uniformed load tests. Wind uplift capacity is conducted for both small-scale 5' x 9' and large-scale 12' x 24' roof assemblies.



THE STANDARDIZED TESTS PERFORMED INCLUDE:

- ASTM E330
- ASTM E72
- ASTM E2126
- ASTM C1629/C1629M
- ASTM E695
- ASTM D5420
- ASTM D4977/D4977M
- ASTM E564
- ASTM C627
- FM 4470
- UL 2218A
- FM 4472
- FM 4474
- CAN/CSA-A123.21-14
- FBC TAS 114-95.1
- UL 580
- UL 1897

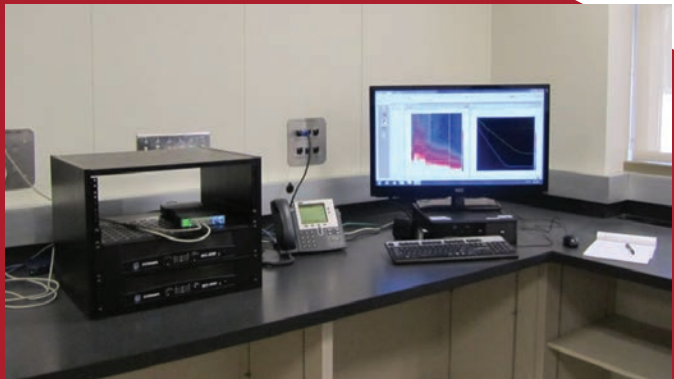


ACOUSTICAL TESTING AND EVALUATIONS

The USG Acoustical Test Facility (ATF) is a unique lab designed to test the acoustical performance of a variety of building materials and systems. It was constructed in 1996 and recently updated with state-of-the-art data acquisition equipment, Bruel & Kjaer Pulse Analysis System. The ATF is NVLAP accredited to ISO/IEC 17025:2005 for performing a wide range of acoustical tests, including absorption, transmission loss of partitions, floor/ceiling transmission loss, and impact isolation and interzone attenuation.

THE ATF IS NVLAP ACCREDITED FOR THE FOLLOWING ASTM TEST STANDARDS:

- ASTM C423
- ASTM E90
- ASTM E492
- ASTM E1414
- ASTM E1111
- ASTM E596



ANALYTICAL TESTING AND EVALUATIONS

The analytical lab provides high-quality chemical analysis and material characterization services with scientists well versed in physical, organic and inorganic chemistry. The lab is equipped with instruments to perform x-ray diffraction, x-ray fluorescence, spectroscopy, particle size analysis, surface area analysis, thermal analysis, chromatography and various levels of microscopy. In addition, the analytical lab offers an IAS ISO 17025 Accredited Emissions Test Chamber for identification and quantitative analysis of building products and raw materials for volatile organic compounds (VOC) according to California CDPH Standard Method V1.1 (CA Section 01350).





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